

SPARTA USER GROUP MEETING. JUNE 2021

- Learn about the latest innovation from NewEra Software, Inc.
- Agenda:
 - Short product review.
 - Introduction to the issues going forward.
 - Finding a better way.

- Glennon Bagsby GHB@NEWERA.COM



THE NewEra products

The Control Editor (TCE)
Image Focus (IFO)

Integrity Controls Environment
(ICE)



NewEra Software – Our Mission

NewEra Software continues to support z/OS professionals by helping them maintain the highest levels of operational integrity and readiness of their z/OS environment. We do this by providing innovative products and unique tools that monitor, protect, and evaluate the most critical datasets and assets of the z/OS Platform with the Integrity Controls Environment (ICE).





Stand Alone Environment SAE.

Repair IPL failures

IPL directly from DASD TAPE CDROM USB drive Network File

Terminal interface on HMC Integrated console or 3270

Single USER ISPF like interface

EDIT functions for PDS datasets

ERASE of DASD volumes

New interface to Image Focus. SAEBATA



Another First in Innovation, Quality and Service



Image Focus IFO

Inspects configuration files

SYSPLEX, z/OS, JES, VTAM, TCP/IP, CICS

SERVAUT, PAGENT

PROGRAM FAULTS, ie...S047 ABENDS

CSFPRMxx for ICSF Inspections

Creates profiles and history of configurations to detect changes.

Detects Dynamic changes not harden into PARMLIB members.

New BATCH jobs ICEBATA and SAEBATA



Another First in Innovation, Quality and Service



The Control Editor TCE

Can provide additional levels of control of events to critical datasets and files.

Multi Factor Access controls (MFE)

Member level access rights by USERID

Email notifications to stake holders

Can enforce documentation standards

Provides automatic backup of changes (versions)

Provides for compare and restore functions

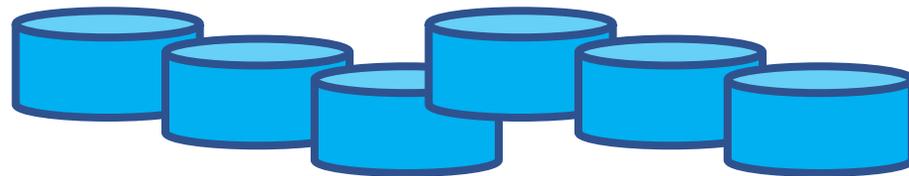
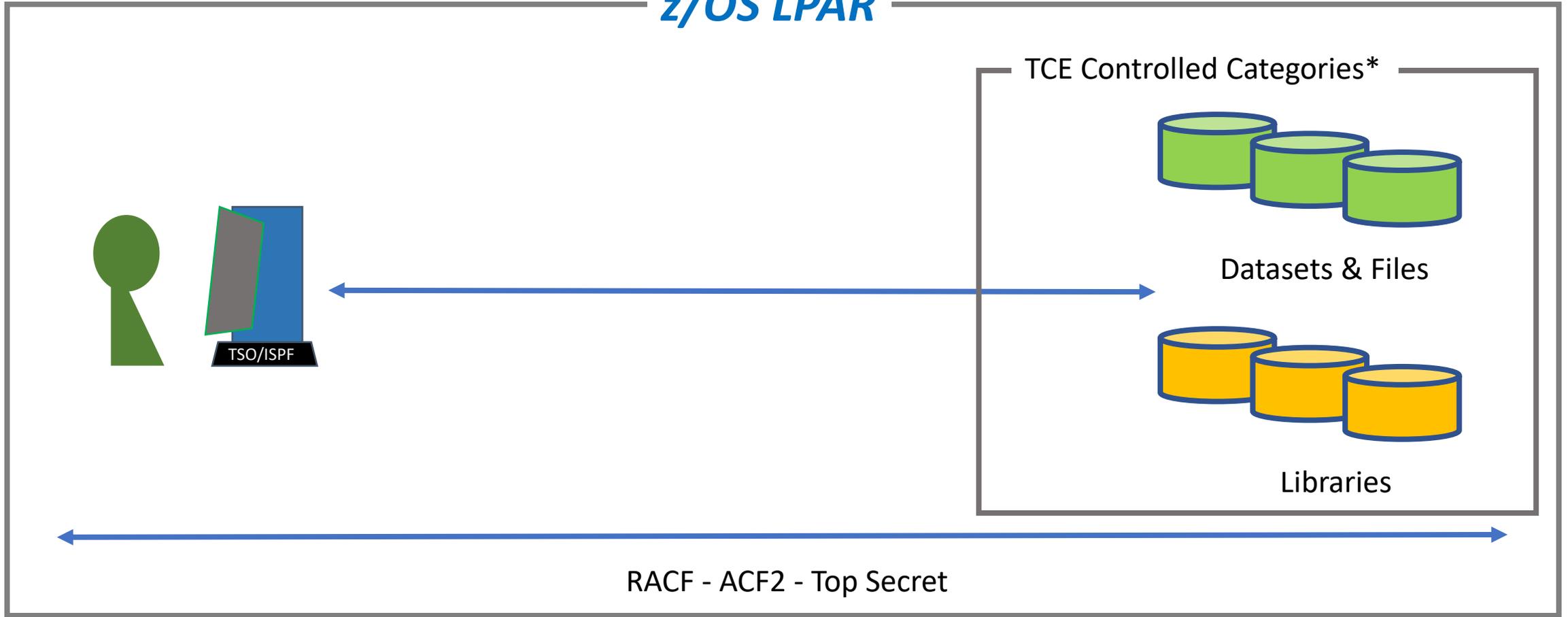
Provides for standard and query base reporting from journals.



Another First in Innovation, Quality and Service

Multi-Factor Edit (MFE) – Edit & Fully Control

z/OS LPAR



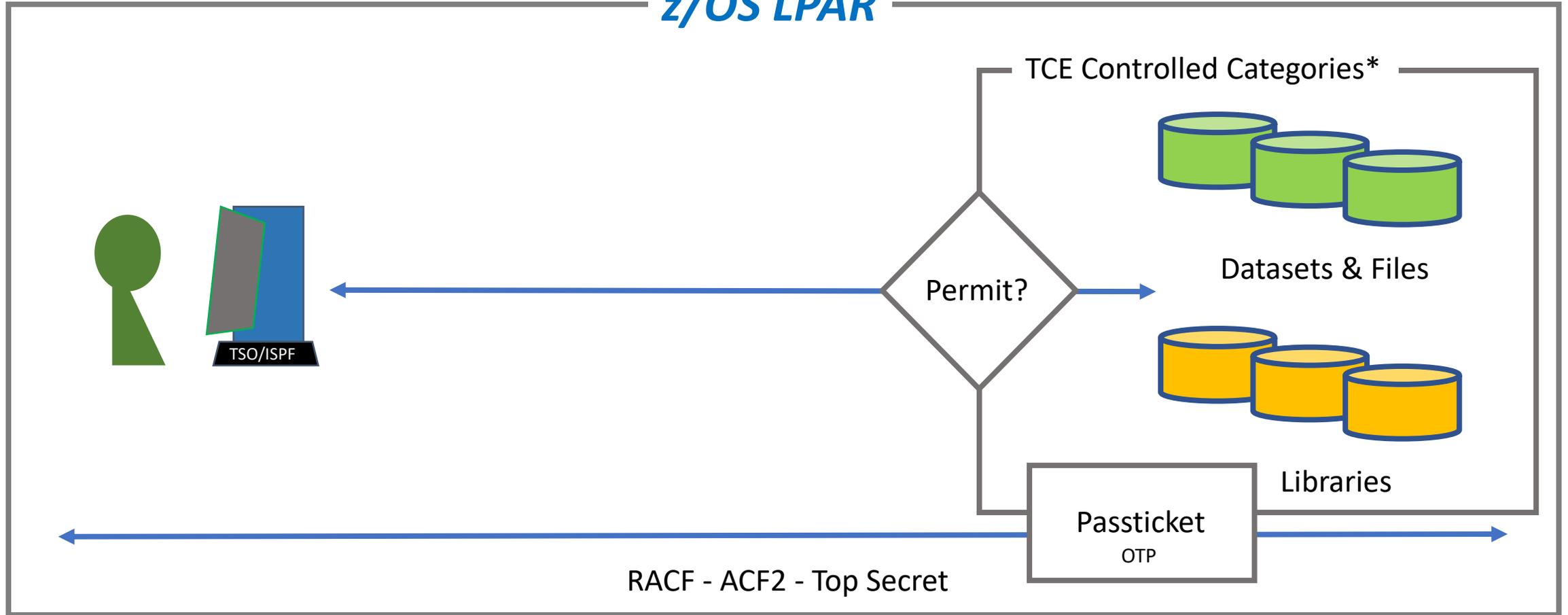
Controlled Categories and Journals

*NIST - Dependency Mapping
SP 800-207 August 2020

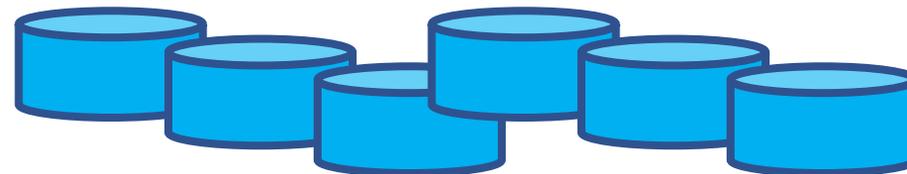


Multi-Factor Edit (MFE) – Edit & Fully Control

z/OS LPAR



* Excessive access checking - The core part of protecting z/OS from malicious, hurtful activities. (ZTA)



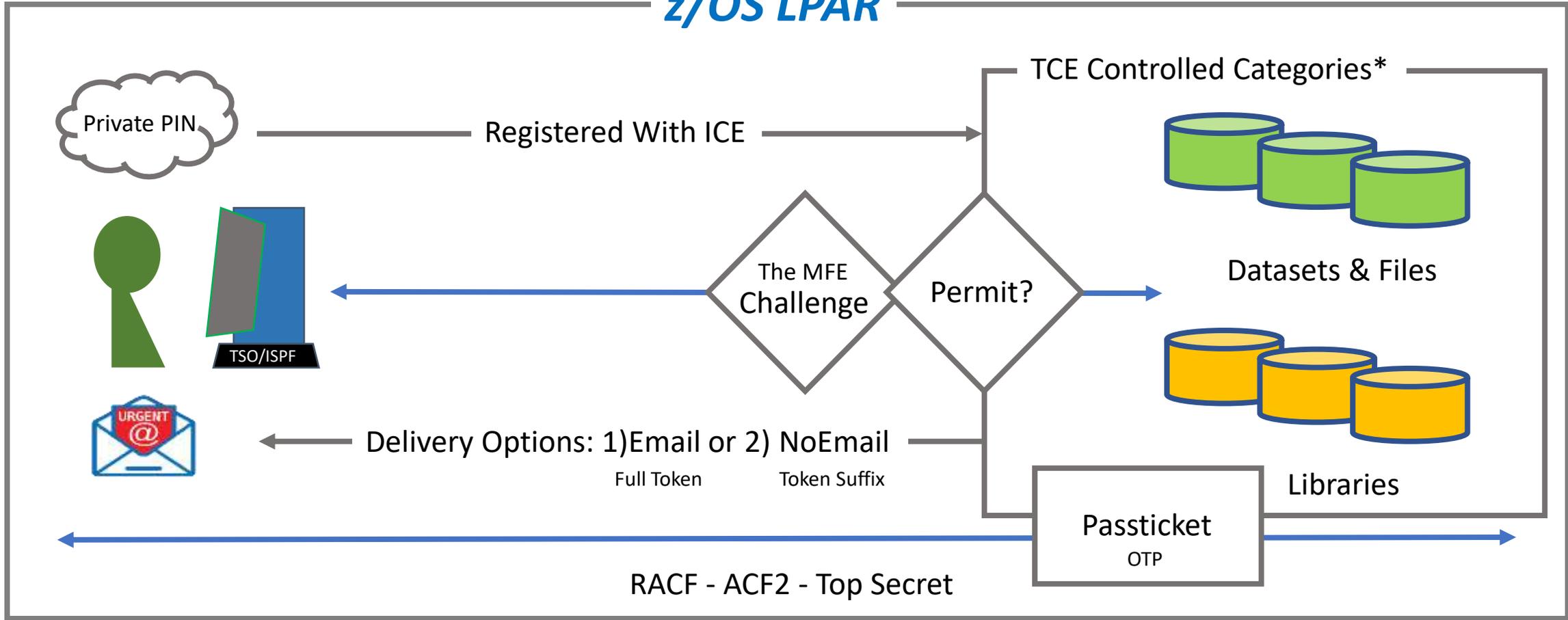
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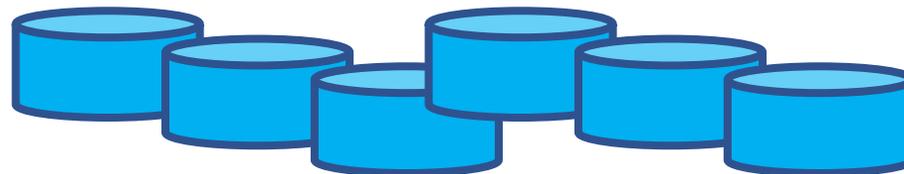


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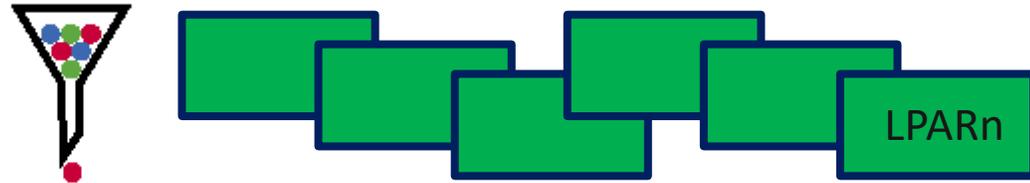
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The ICE Dataspace

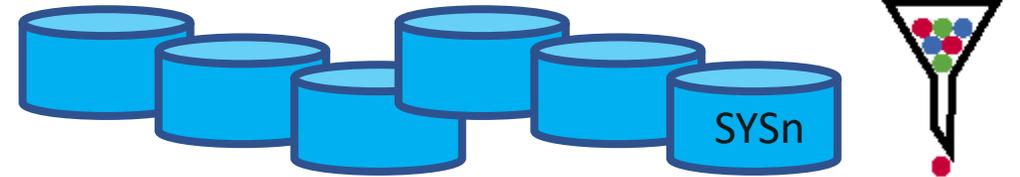
LPAR and Sysplex Inspections



W(E)

Inspection Logs, Baselines & Clusters

Policy Decision and Enforcement Points



EXC

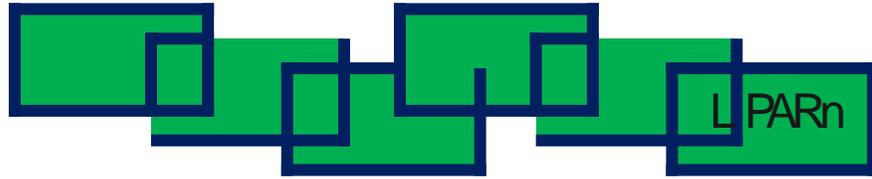
Controlled Categories and Journals



ICEDirect – VTAM Based Interface to the ICE Dataspace:

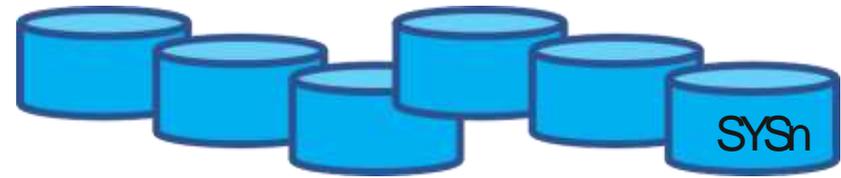
The ICE Dataspace

Automated System Configuration Inspection

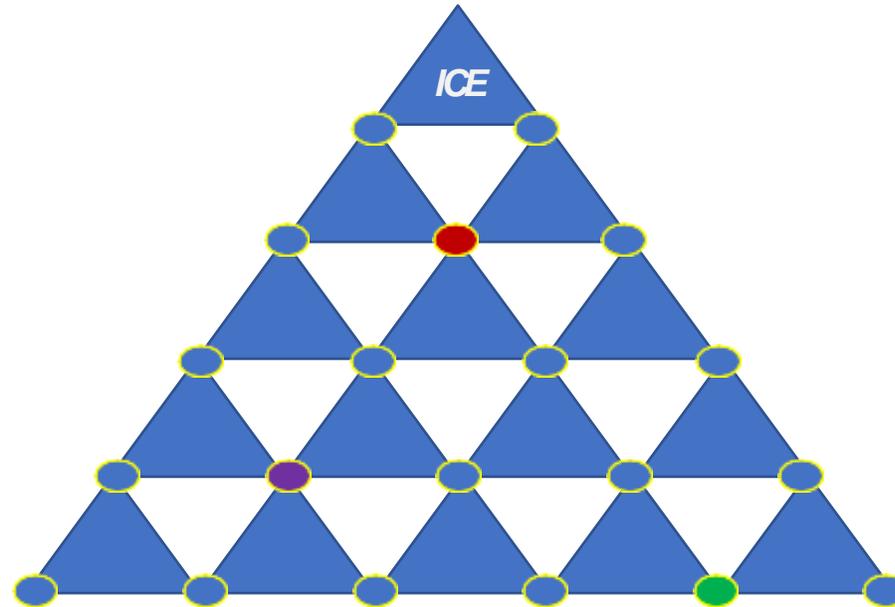


Inspection Logs, Baselines & Sysplex Clusters

Resource Policy Decision & Enforcement Points

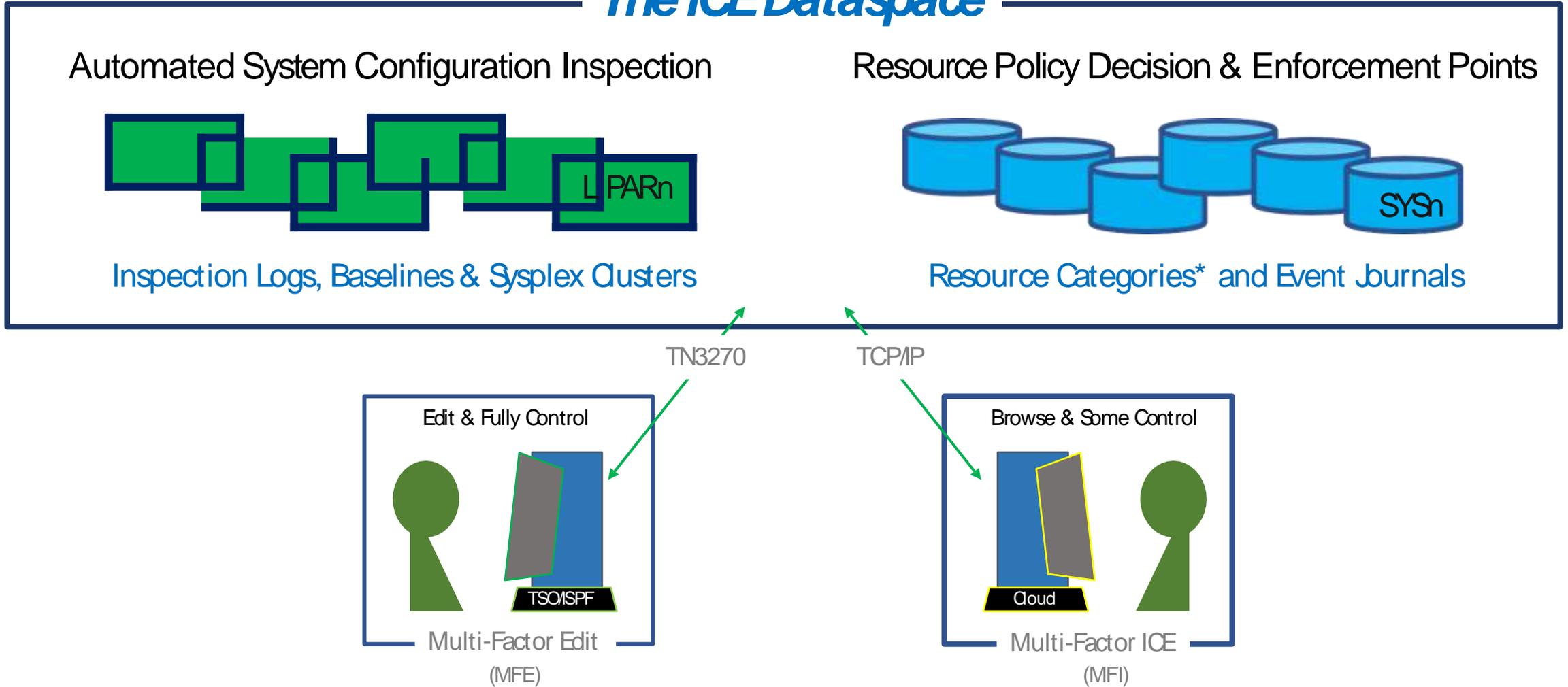


Resource Categories* and Event Journals



ICE Modernization

The ICE Dataspace



* Zero-Trust Architecture (ZTA) - NIST SP800-207 August 2020: 1) Dependency Mapping; 2) Excessive access checking - The core parts of protecting z/OS from malicious, hurtful activities.

Welcome to ICEDirect – Safari, Firefox, Edge and/or Chrome:

NSIMCTL 0803 ICE 16.0 - MY ICE Direct ShortCuts - PROBI1

<> For UserId Specific Identity and Multi-Factor Edit Settings.

.. MyWHO .. MyHIS .. MyPIN .. MyPMT .. MyEML .. MyDEL .. MyEXP

<> For Accessing Control Editor Event Journal Records.

.. MyQRY .. MyPDS .. MyMBR .. MyLIB .. MyMOD
.. MyUSS .. MySEQ .. MyUSR .. MyCMD .. MyMSG .. MyVOL

<> For Updating and Activating The Control Editor Control Settings.

.. MyADM .. MyAUD .. MyACT .. MyCTL .. MyBNY .. MyMFE

<> For Access to Image FOCUS Inspections, Packages and Messages.

.. MyBGN .. MyPAK .. MyBAT .. MyCHK .. MyMID

<> For Multi-Functional Command Line MY Application Interfaces.

[Click Here](#)

The screenshot shows the ICE Direct web interface. On the left is a sidebar menu with sections: 'YourId Settings' (MyWHO, MyHIS, MyMFI, MyMFE), 'z/OS Inspections' (MyBGN, MyBAT, MySAE, MyCHK, MyILC), 'TCE Boundaries' (MyBNY, MyADM, MyAUD, MyEXT, MyDEZ, MyEXC, MyMFA), and 'Access Journals' (MyQRY, MyPDS, MyMBR, MyLIB, MyMOD, MyUSS). The main content area is titled 'Select Index - List ICEBATA LPAR Inspections' and has two radio buttons: 'Use Default ICEBATA Dataset: IFO.MTGY.ICEBATA.S0W1.LOG' (selected) and 'Switch to Alternative Dataset: alternative_ftp.ICEBATA.system_name.LOG'. Below this is a 'Submit Request' button and an 'Interval Detector' link. The page header shows 'Beta - 21/04/19', 'MyHost: S0W1', 'Clear Lower Frame', 'Safari', 'MyAPI', and 'Logout'. The main content area displays 'ICEBATA Source Inspection Log Worksheet - 5 WksRows' with a table:

Row	Launch	Finding	ICEBATA Inspection Logs	Analysis	IPLPath	Reports
01			IFO.MTGY.ICEBATA.S0W0.LOG Inspection Date:2009025 and Time:09:28:12	<input checked="" type="checkbox"/>		
02			IFO.MTGY.ICEBATA.S0W1.LOG Inspection Date:210427 and Time:20:05:36	<input checked="" type="checkbox"/>		
03			IFO.MTGY.ICEBATA.S0W2.LOG Inspection Date:2009025 and Time:09:28:12	<input type="checkbox"/>		
04			IFO.MTGY.ICEBATA.S0W3.LOG Inspection Date:2009025 and Time:09:28:12	<input type="checkbox"/>		
05			IFO.MTGY.ICEBATA.S0W4.LOG Inspection Date:2009025 and Time:09:28:12	<input checked="" type="checkbox"/>		

At the bottom of the table, there is a 'Select/Update' button and a status bar showing 'Elapsed Seconds: 5.17', 'ICE:59%', and 'TCP:41%'. A 'To Top' link is in the bottom right corner.



The Integrity Controls Environment (ICE) – Development Directives:

- The Integrity Controls Environment (ICE) is a purpose-built, proprietary z/OS software utility, developed and maintained by NewEra Software.
- It contains NO public domain source code, exclusively supports two primary applications: Image FOCUS (Inspections) and The Control Editor (Resource Control).
- Its installation package is digitally signed with an encoded HASH. This “Digital Key” is asynchronously delivered electronically and is used to verify that the package was not tampered with prior to installation.
- All components of an ICE install, are programmatically *Closed* to all others with NO external servers required.

Consider – Apache, Tomcat, Liberty Servers & Zowe – Open to all and all likely to contain public domain source.

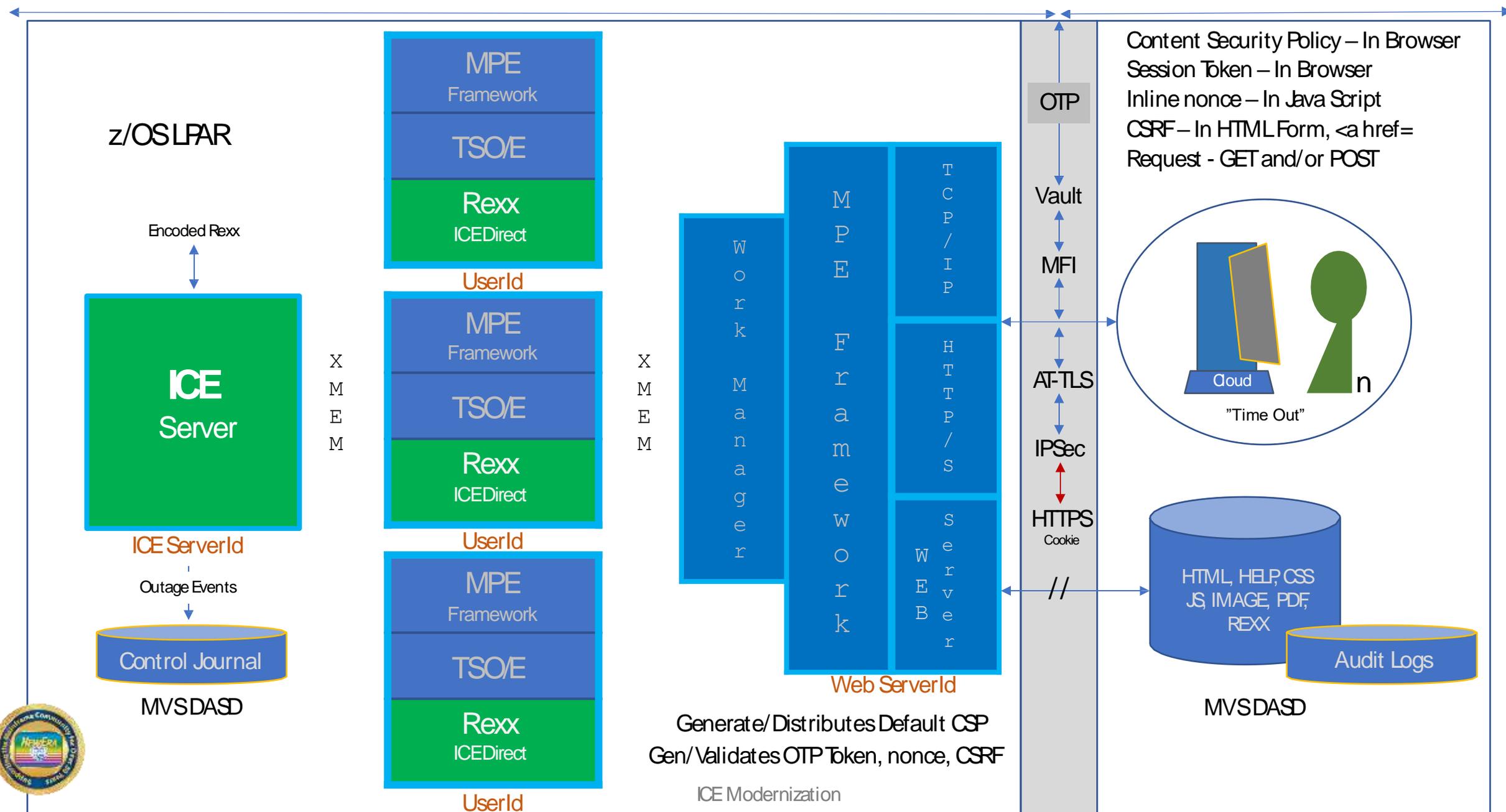


Security - Under the Covers

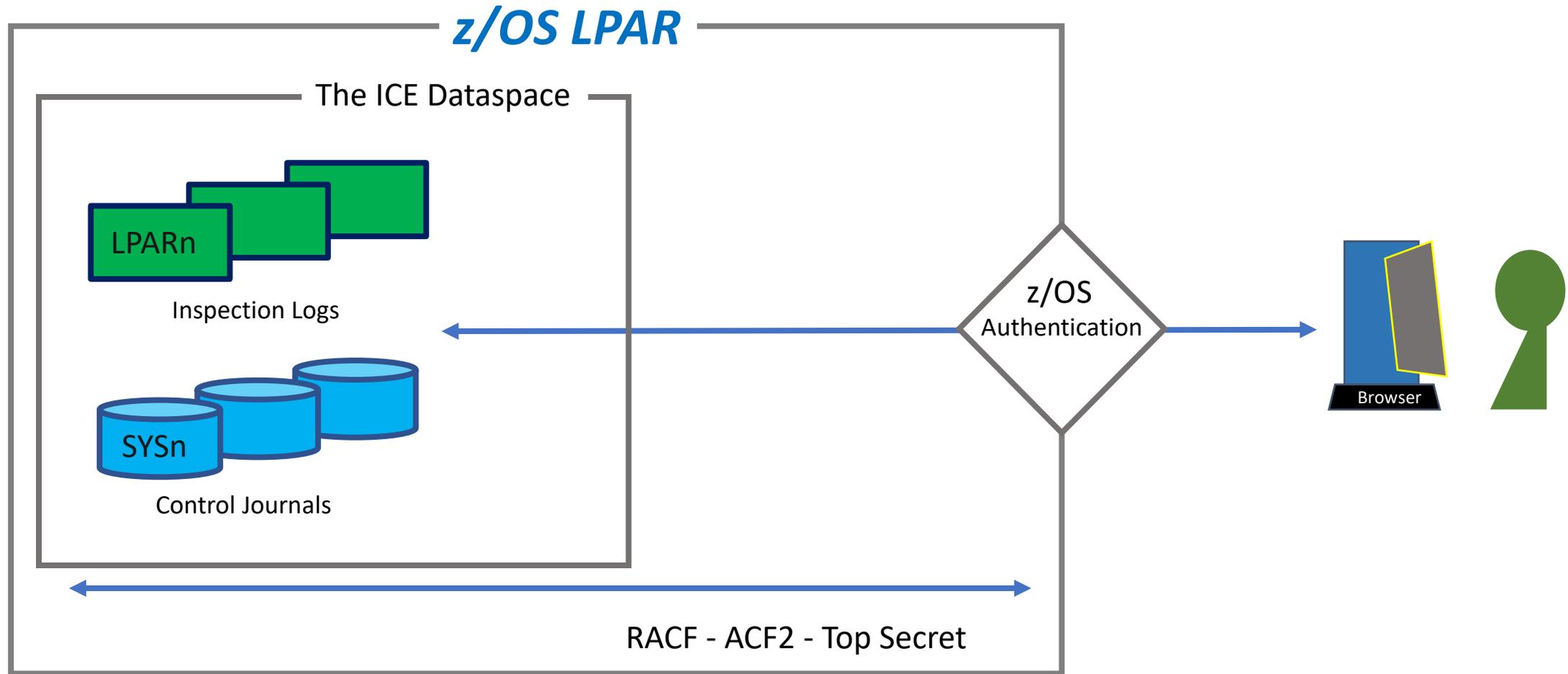
Mainframe ESM

Fire Wall

Browser/Cloud



Multi-Factor ICE (MFI) – Browse & Some Control

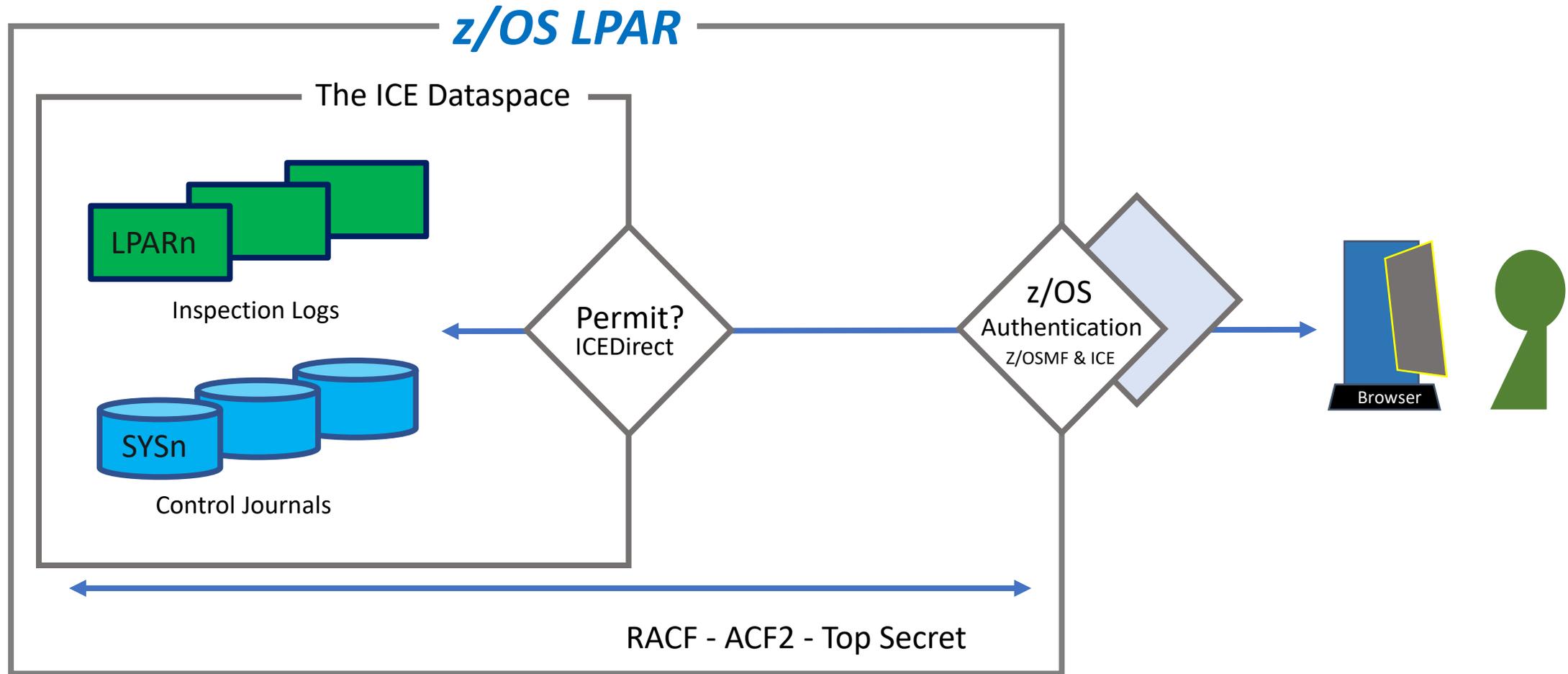


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z/OSMF - A "Best Practices" Option



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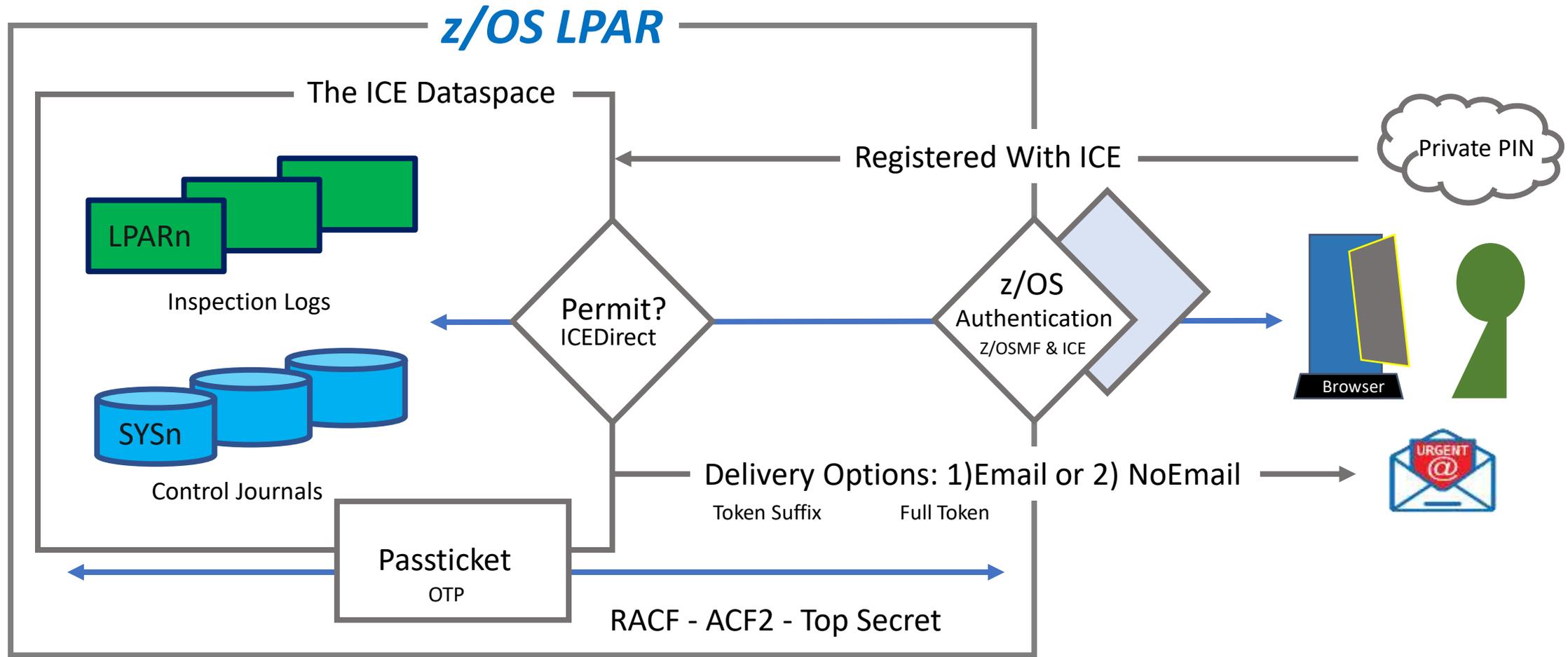


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z/OSMF - A "Best Practices" Option



Multi-Factor ICE (MFI) – Browse & Some Control



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z/OSMF - A "Best Practices" Option



Security – On the Web just as in the Real World:



**Penetration
testing for an
evolving **attack
surface****



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